AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF THE CLAIMS

1. (Previously Presented) A method for resolving data collision in a network shared by a plurality of users, the method comprising:

sending a first back-off window to each of the plurality of users of the network;

estimating a collision rate over a history length of reservation, wherein the history length of reservation comprises four reservation slots;

calculating a second back-off window based on at least one operational characteristic of the network, wherein one of the operational characteristics of the network comprises the collision rate over the history length of reservation;

-and

sending the second back-off window to each of the plurality of users of the network at least every four reservation slots to maintain a substantially constant collision rate of approximately 1-2/e.

2. (Previously Presented) The method of claim 1, further comprising calculating subsequent back-off windows based on at least one operational characteristic of the network and sending the subsequent back-off windows to each of the plurality of users of the network.

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Previously Presented) The method of claim ~~1~~2, further comprising dynamically calculating subsequent back-off windows to maintain a substantially constant collision rate and sending the subsequent back-off windows to each of the

plurality of users of the network.

8. (Currently Amended) The method of claim 1, further comprising dynamically calculating subsequent back-off windows~~wherein the step of calculating the second back-off window based on at least one operational characteristic comprises calculating the back-off window~~ based on a number of users on the network.

9. (Currently Amended) The method of claim 1, further comprising dynamically calculating subsequent back-off windows ~~wherein the step of calculating the second back-off window based on at least one operational characteristic comprises calculating the back-off window~~ to maintain the back-off window approximately equal to a number of users.

10. (Currently Amended) A method for resolving data collision in a shared network, the method comprising,

sending a common back-off window to each of a plurality of users of the network;

estimating a collision rate over a history length of reservation, wherein the history length of reservation comprises four reservation slots;

and

recalculating and sending new back-off windows to each of the plurality of users of the network at least every four reservation slots to maintain a substantially constant collision rate of approximately 1-2/e and to increase throughput of the network.

11. (Canceled)

12. (Currently Amended) The method of claim 10, further comprising dynamically calculating subsequent back-off windows to maintain a substantially constant collision rate of 1-2/e and sending the subsequent back-off windows to each of the plurality of users of the network~~The method of claim 11, further comprising the step of estimating the collision rate based on the status of at least every four reservation slots~~.

13. (Canceled)

14. (Canceled)

15. (Currently Amended) The method of claim ~~10~~12, wherein the step of dynamically recalculating and sending new back-off windows comprises calculating the back-off windows based on a number of users on the network.

16. (Currently Amended) The method of claim ~~10~~12, wherein the step of dynamically recalculating and sending new back-off windows comprises calculating the back-off windows to maintain the back-off window approximately equal to a number of users.

17. (Currently Amended) A system for resolving data collisions in a shared network, comprising:

a plurality of remove devices; and

an access point in communication with the plurality of remote devices, wherein the access point further comprises:

a switch for communicating with the plurality of remote devices;

a transceiver for sending information to and receiving information from the plurality of remote devices; and

a collision resolution device that calculates an initial back-off window to be sent to each of the plurality of remote devices and dynamically adjusts a back-off window to substantially maintain a predetermined constant collision rate of approximately 1-2/e, wherein the collision resolution device estimates the collision rate of the network over a history length of reservation and wherein the history length of reservation comprises four reservation slots.

18. (Canceled)

19. (Currently Amended) The system of claim 17, wherein the collision resolution device calculates subsequent back-off windows based on at least one operational characteristic of the network and sends the subsequent back-off windows to each of the plurality of users of the network~~estimates the collision rate of the network from a status of reservation slots~~.